

## REMARKS

Claims 1-20 remain pending without amendment. The Abstract is amended to be shorter. These changes are believed not to introduce new matter, and entry of the Amendment is respectfully requested.

Based on the above Amendment and the following Remarks, Applicant respectfully requests that the examiner reconsider all outstanding objections and rejections, and withdraw them.

### The July 5, 2006 Office Action

In the Office Action dated July 5, 2006, the following objections and rejections were asserted:

- ¶ 2. The abstract was objected to as having more than 150 words. In response, Applicants have amended the Abstract to comply with PTO requirements. Reconsideration and withdrawal of the objection are respectfully requested
- ¶ 3. The “listing of references” was asserted not to be a proper IDS, and must be submitted in a separate paper. The apparent objection is not understood, inasmuch as the documents desired for consideration were listed on a Form PTO-1449 filed concurrently with the application; the documents in paragraph [0028] were not intended to be submitted as part of an IDS. Applicants note that the Form PTO-1449 was properly initialed so that the listed documents have been made of record, as desired. In any event, if ¶ 3 of the Office Action was intended as an objection, then reconsideration and withdrawal of the objection are respectfully requested.
- ¶ 4. Claims 13-16 were objected to as being informal. Applicants traverse the objection for reasons presented below.
- ¶ 5-6. Claims 1-20 were rejected under 35 U.S.C. § 103 based on a combination of two references. Applicants traverse the rejection for reasons presented below.

#### Objection to the Claims (§ 4 of the Office Action)

In § 4 of the Office Action, the examiner objects to Claims 13-16 as being informal. The Office Action does not explain the basis of the objection, such as a section of the statute, a section of the rules, or the MPEP. Accordingly, the objection appears to be unfounded in law or regulation or PTO standard, and Applicants traverse the objection.

Applicants respectfully insist that Claims 13-16 are proper. These claims refer to a *system*, which is clearly a “machine” within the meaning of 35 U.S.C. § 101.<sup>1</sup> The fact that these system claims depend from a method claim does not render them informal. In any event, re-casting them in independent form (as suggested in the Office Action) would have no effect on whether they are formal or informal. Therefore, Applicants submit that Claims 13-16 are not informal in any way and should be accepted as originally filed.

In any event, reconsideration and withdrawal of the objection to the claims are respectfully requested. If the examiner maintains this objection, it is requested that the examiner cite a particular basis therefor, including citation of statute or rule or objective articulated PTO standard.

#### Rejection under 35 U.S.C. § 103 (§ 5 - § 6 of the Office Action)

Claims 1-20 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent Application Publication No. 2003/0065655 (Syeda-Mahmood) in view of U.S. Patent No. 6,986,104 (Green *et al.*).

Applicants traverse the rejection.

At the outset, Applicants submit that the primary reference, Syeda-Mahmood, is not even closely related to the field of the present invention. Claim 1 is not merely directed to a method of searching a document; rather, Claim 1 is directed to a method of searching a particular type of document--a document having *nested-structure document-specific markup*. This limitation is recited in both the preamble and the body of Claim 1:

1. A method of searching a document having *nested-structure document-specific markup*, the method comprising:
  - receiving a query that designates at least (A) a phrase to be matched in a phrase matching process, and (B) a selective designation of at least *a tag or annotation that is to be ignored* during the phrase matching process;
  - deriving query-specific indices based on query-independent indices that were created specific to each document; and
  - carrying out the phrase matching process using the query-specific indices on the document having the *nested-structure document-specific markup*. (emphasis added)

In one example (see dependent Claim 9), this nested-structure document-specific markup is in Extensible Markup Language (XML). As explained in Applicants' BACKGROUND OF THE INVENTION,<sup>2</sup> a problem in searching documents having a nested-structure document-specific markup such as XML, is that it is extremely difficult to know which text (a tag or annotation) to ignore during a phrase matching process (see emphasized text in Claim 1 above).

In contrast to the present invention, Syeda-Mahmood merely focuses on the problem of detecting and identifying "topical events" that occur in classroom or lecture environments, a method that is valuable for semantic browsing of *slide shows, transcripts, and recordings*. Thus, Syeda-Mahmood is not even concerned with the same field as Applicants' invention, namely,

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<sup>1</sup> Whoever invents or discovers any new and useful process, *machine*, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title. (emphasis added)

<sup>2</sup> See *especially* paragraphs [0005]-[0006] and [0014], plus the example discussed in paragraphs [0007] through [0013].

searching *a document having nested-structure document-specific markup*. Thus, when the Office Action asserts<sup>3</sup> that:

Syeda-Mahmood teaches a method of searching a document having nested-structure document-specific markup (see para. 0044),

the Office Action *is simply incorrect*. Paragraph [0044] of the Syeda-Mahmood patent refers to a FIG. 5 foil (slide) whose content, as an example, happens to relate to “XML Schema.” Syeda-Mahmood’s FIG. 5 is thus merely one example of a foil (slide) that is analyzed, the foil (slide) itself being broken down into nine different phrases labeled in paragraph [0044] as an example of conventional phrase extraction. The foil (slide) itself does not have a nested-structure *markup*, much less a *nested-structure document-specific markup* as claimed. Thus, paragraph [0044] and FIG. 5 of Syeda-Mahmood patent *do not in any way define the structure of a document that is being searched*.

Apparently, the examiner found a reference that referred to “XML” and assumed that the documents or other items being searched had an XML structure. However, upon reading the Syeda-Mahmood reference, it is seen that the items being searched in the Syeda-Mahmood reference are not structured documents as required by the claims. Thus, the Syeda-Mahmood reference is profoundly deficient as a primary reference.

Also significant is the fact that the Office Action correctly admits that Syeda-Mahmood--which is *the primary reference*--does not even explicitly indicate that a tag or annotation is to be ignored “during processing.”<sup>4</sup> This conclusion is true because Syeda-Mahmood does not search

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<sup>3</sup> Middle of page 4 of the July 5, 2006 Office Action.

<sup>4</sup> Actually, Claim 1 recites “in the phrase matching process”.

documents that have tags or annotations *in the first place*. And without tags or annotations in the items being searched, clearly there is no reason for Syeda-Mahmood to ignore them.

Claim 1 recites that a “query [] designates ... a selective designation of at least a tag or annotation that is to be ignored during the phrase matching process.” Ignoring tags or annotations in a document having markup that is specific to that document, is the difficult problem that is described in Applicants’ Background, and that Applicants’ invention solves. However, Syeda-Mahmood’s system clearly cannot solve that problem.

For that claim limitation, the examiner is forced to refer to a secondary reference, the Green *et al.* patent. However, at the outset, Applicants note that the combination of the Syeda-Mahmood reference with any reference to teach this claim limitation is illogical, because Syeda-Mahmood does not even search documents having a tag or annotation that could be ignored. Thus, it is clear that the combination of the Syeda-Mahmood and Green *et al.* references is improper for legal reasons.

Moreover, for factual reasons, the Green *et al.* patent does not overcome the deficiencies of the Syeda-Mahmood reference in the context of the present invention. Green *et al.* are concerned with transforming information from one semantic environment into another, a field that is substantially distinct from phrase matching in document searches. Moreover, the particular passages to which the Office Action refers<sup>5</sup> has no relevance to ignoring tags or annotations, much less in documents having nested-structure document-specific markup. Rather, what Green *et al.* ignore are *parse trees* that have low scores in a conventional chart parsing method; they do not ignore tags or annotations as claimed.

Finally, the Office Action's purported "motivation to combine" the Syeda-Mahmood and Green *et al.* references does not even describe advantages of ignoring tags and annotations. It has nothing to do with "building grammars and rules for the normalization of contents" or "identify[ing] how many times or how often individual elements are present" or "provid[ing] information for use in prioritizing elements for mapping to the standardized lexicon."

Thus, even if the Green *et al.* patent were somehow "combined" with the Syeda-Mahmood reference, the resulting combination would not yield the present invention, would not even be concerned with solving the same problem that is solved by the present invention, would not have the advantages possessed by the present invention, and instead would have "advantages" that are irrelevant to the field of the present invention.

Thus, it appears that the Office Action reflects a lack of appreciation of the very problem that is solved by the invention, searching in documents having nested-structure document-specific markup. Accordingly, if the examiner contemplates asserting any art rejection in a future Office Action, **Applicants request that the examiner first telephone the undersigned representative for a telephone interview** so that the invention may be better understood.

#### The Drawings

Applicants request that the examiner affirmatively indicate approval of the formal drawings in the next official communication.

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<sup>5</sup> Column 16, lines 36-41 appears to be a typographical error as that passage apparently has no relevance whatsoever to what is being discussed in the Office Action at that point. Column 37, lines 10-3 and 32-34 (also cited in the Office Action) are only marginally more relevant and are discussed herein.

Conclusion

All objections and rejections have been complied with, properly traversed, or rendered moot. Thus, it now appears that the application is in condition for allowance. Should any questions arise, the examiner is invited to call the undersigned representative so that this case may receive an early Notice of Allowance.

Favorable consideration and allowance are earnestly solicited.

Respectfully submitted,

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